# 9. Potato

**Program Name: Potato.java          Input File: potato.dat**

You and your friends decide that today is the best day to play Hot Potato. Who decided this? The world may never know.  However, you and your `n` friends are going to play the game.

In the background, a song is playing that lasts `k` seconds. Each second, a person tosses the potato to someone else (a person cannot pass it to themselves). Considering you don't want to lose, determine how many ways the potato can end up back to you if you are holding the potato first.

### Input
The first integer T will represent how many test cases there are to follow. For each test case, there will be a line containing two numbers `n` and `k`, the number of other friends and number of seconds the song is playing respectively, where `0 <= n, k <= 1000`.

### Output
For each test case print out the number of ways you can lose, modulo `10^5 + 3, 100003`.

### Example Input File
```
3
3 4
31 75
99 99
```

### Example Output to Screen
```
21
74685
33863
```